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Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution

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Description

Review of *Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution* / Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution. Atkinson, Robert D and Andrew S. McKay The Information Technology & Innovation Foundation and Overselling the Web? Development and the Internet Kenny, Charles London: Lynne Rienner Publishers

Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution

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About

Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution.
Atkinson, Robert D and Andrew S. McKay
The Information Technology & Innovation Foundation

Overselling the Web? Development and the Internet
Kenny, Charles
London: Lynne Rienner Publishers

The question of the overall economic impact of the Internet, perhaps the key aspect of the "Digital Revolution," is an important one. It relates to the issue of which elements of the American economy have been most responsible for a key contributor to economic growth, productivity, and roughly the relationship between economic inputs and outputs. Profits, wages, capital for reinvestment, all depend, obviously, on keeping a positive balance at the end of the process. If productivity goes up, then output per unit of input does, too, and more income is available for all the above allocations. If productivity goes down, some actors in of the process will have to, in effect, tighten their belt.

As important as productivity is, the relationship between it and the impact of the Internet, broadly considered as a digitally enabled economy, is not clear. Many, like Atkinson and McKay, authors of "Digital Prosperity" have seen it as "at the heart of America's growing economic prosperity." (p. iii) No lesser a luminary than Alan Greenspan has agreed. As Greenspan said in 2002:

Arguably, the pickup in productivity growth since 1995 largely reflects the ongoing incorporation of innovations in computing and communications technologies into the capital stock and business practices. Indeed, the transition to the higher permanent level of productivity associated with these innovations is likely not yet completed. [1]

Others, however, including Charles Kenny, author of Overselling the Web? Development and the Internet. take a far more cautious view. In particular, Kenny argues that technological innovation may be a critical economic factor increasing productivity and economic growth but only in carefully defined circumstances.

Kenny's perspective is that the root causes of economic development are at best ill understood, and cultural factors may be as important, if not more important than traditional economic factors. As he puts it: "The Internet is far from the first proposed silver bullet for development." (p. 15)

This issue is, of course, elusive. And neither does a close reading of the two works under review provide a final resolution. But taken together they nicely highlight key issues.

Each of the main authors of these two works is highly qualified. Robert D. Atkinson is the President of the Information Technology and Innovation Foundation and former Director of the Progressive Policy Institute's Technology and New Economy Project. (His co-author Andrew McKay is a student in Economics at Swarthmore College.)

Charles Kenny is equally qualified. He is a developmental economist working in Washington, D.C. and has worked on IT projects and done research for the past six years related to Africa, Latin America, and Asia.

Yet the conclusions of these highly qualified authors are as opposed to each other as one could imagine. Atkinson and McKay are the cheerleaders at the IT banquet. Atkinson plays Cassandra in the after-dinner entertainment, cautioning the Third World in particular about over-investing in IT.

Atkinson's position is probably the most familiar to us as it builds on the foundation of the dot.com mania and the subsequent more tempered enthusiasms for IT investment. His believes that IT investment has a number of positive results:

- IT drives productivity growth
- IT boosts growth indirectly
- IT ensures that the economy runs at full capacity
- IT enables good and services to be allocated more efficiently
- IT enable higher produces and services
- IT drives innovation

Atkinson and McKay are little concerned with potential shortcomings of IT investment. The six arguments above are each given an entire chapter in their piece, more an extended article than a book, and altogether forty-some pages are dedicated to proving them.

The "Downside of IT" gets two pages of less than balanced prose. Those worried about Risks to Privacy and Community, for example, are said to fear a dystopia out of largely hypothetical and speculative concerns. (p. 51)

A battle-scarred survivor of the dot.com boom might very well ask the authors how it is that the rosy future predicted in the 1990′s has taken so long to eventuate, or in less academic prose, "Why should we believe you this time?"

The authors' answer is basically the same as Alan Greenspan's: there is an inevitable lag between investment and its consequences. We are now reaping the productivity increases resulting from previous IT investment.

The authors' confidence is such that they do not hesitate to put forward a plan of action for politicians, some of whom, it is said, are still prescribing for the "old economy." (p. iii) The action plan includes:

- Give the digital economy its due. (That is, see it as the "centerpiece of economic policy.")
- Actively encourage digital innovation and transformation of economic sectors.
- Use the tax code to spur IT investment
- Encourage universal digital literacy and digital technology adoption.
- Do no harm. (That is, avoid laws and regulations that would slow digital transformation.) (p. 2)

Neither do Atkinson and McKay limit their recommendations to American politicians. In their analysis, the economies of other nations also demonstrate the multiplier effects of investments in IT, and such investments would be good for any and all nations. (p. 2)

This brings us to Kenny who, like most developmental economists, has a healthy regard for the importance of divergent national cultures. Culture as a factor is largely excluded from the analyses of orthodox economists. To them, inputs and outputs are mediated through productivity alone.

To a developmental economist, however, every economic process occurs in some very particular place and with some highly individualistic human participants. In short, culture is involved in productivity, with all that this implies.

A brief but useful definition of culture is:

In general, the term culture denotes the whole product of an individual, group or society of intelligent beings. It includes technology, art, science, as well as moral systems and the *characteristic behaviors and habits of the selected intelligent entities. [2]*

Part of the distinction between these two works results from their definitions of the key element, “technology.” To Atkinson and McKay, technology is digital and it requires electricity, to name only one key element. It might embrace organizational techniques and other processes beyond simple material factors, but these ultimately depend upon computer-based information systems.

To Kenny, however, technology is far broader: “In short, technology is everything that affects the level of economic output, except capital and labor.” (p. 16) Now we are into a very wide realm of inputs, including most emphatically environmental factors, human choices, resource constraints, moral judgments, religious prohibitions, etc., etc.

Kenny provides a wide variety of well-researched and carefully studied examples of spectacular failures in IT-related investment projects among lesser-developed countries (LDCs). Some of these, moreover, were earlier cited by IT-investment enthusiasts as model projects, but stagnated when other restrictions became clear. Internet kiosks, for example, are easily constructed given investment capital and political will. They are not, however, conveniently accessed by a largely illiterate, poverty-stricken, local population.

Kenny’s analysis of the use of IT in the developed world, or in rapidly developing countries like China, indicates that the differences with the LDCs are not simply quantitative ones—a lack of capital, for example. There are also many qualitative or culturally bound ones.

Cultural restraints (in the broad sense utilized by Kenny) would include literacy (particularly literacy in English), poor or nonexistent telephone or financial systems, income distribution, hierarchical management structures, gender inequalities, and many other factors. (Kenny, Ch. 4)

These two works are very different in tone. Atkinson and McKay write for a professional audience of businesspeople and politicians. Their tone is accessible if often somewhat overenthusiastic. The reader can breeze through “Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution.” in several hours, even with the most careful reading.

Kenny is a practitioner of the dismal science and has adopted an appropriately academic voice. Every statement is carefully nuanced and qualified. He does a very good job of introducing the reader to key theories and theorists while giving numerous interesting examples, some involving people with whom the reader might identify. But the work is very close to a text and requires close and repeated reading.

The works are similar in that each has notes (Kenny far more than Atkinson and McKay) and each includes a substantial bibliography. Each work could lead the reader into a much deeper understanding of the broader schools of thought they embrace.

The two works examined here each have their own value. “Digital Prosperity” should be on the desk of any manager wanting strong arguments for increasing corporate or institutional investment in technology. Kenny's Overselling the Web? should be on the desk of any executive needing to understand the counter-arguments to the highly enthusiastic IT position. Taken together they nicely bookend the ongoing argument about productivity, growth, and investment in Information Technology (IT).

To transition from book reviewer into an editorial mode, it is perhaps important to point out that there is one point where both works meet, and also a point where, increasingly, it seems that the developed economy of the U.S. is approaching that of the LDCs. This is the issue of how the fruits of higher productivity, whatever its causes, are utilized.

Atkinson and McKay argue, remember, as reproduced above, that:

- IT drives productivity growth
- IT boosts growth indirectly
- IT ensures that the economy runs at full capacity
- IT enables good and services to be allocated more efficiently
- IT enable higher produces and services
- IT drives innovation

These consequences, however, depend upon an unspoken assumption: That the higher profits based on increased productivity facilitated by the IT revolution will be reinvested. Greenspan certainly presumes the same, though he has been less likely to tell us what to do with our profits, assuming as he does that the market speaks with a clear voice on that point: "Reinvest, you fool!"

Kenny, however, discusses the world of the LDCs in which culture determines both distribution and investment or the lack thereof, and in which the market is often distorted by inappropriate decisions made by dominant elites. In that world it is no surprise that reinvestment of profits may lag behind conspicuous consumption or downright theft.

Some American economists are now arguing that neither are domestic profits being reinvested at an appropriate rate. Paul Krugman pointed out, for example, in "Another Economic Disconnect," published in the April 30, 2007 *The New York Times* [3] that corporate profits have more than doubled since 2000, and as a share of national income are at their highest level. However, nonresidential investment lags far behind the 1990s and has, in fact, been declining recently.

Krugman hedges as to the cause of this particular phenomenon, but speculates that it may be because profits are being diverted to buy back corporate stock, running up stock prices, causing grateful shareholders to reward the CEO who decided that this particular use of profits was superior to reinvestment. In this scenario, the CEO is acting out of personal interest, not in the interest of the firm, nor in the long run, that of the stockholders.

Like Krugman, we do not suggest that this is the only or even the most likely explanation for the decline in investment. We feel safe, however, in suggesting that a failure to reinvest, whatever its causes, endangers not only the digital revolution but underlines the importance of considering cultural factors in planning IT investment strategies, whether in the United States or in an LDC.

Notes

[1] See "Remarks by Chairman Alan Greenspan, "Productivity" At the U.S. Department of Labor and American Enterprise Institute Conference, Washington, D.C. October 23,2002 http://www.federalreserve.gov/boardDocs/Speeches/2002/20021023/default.htm

[2] http://en.wikipedia.org/wiki/Culture A more satisfactory article for those wishing a longer discussion of culture can be found at: http://www.wsu.edu/gened/learn-modules/top_culture/culture-definition.html Unlike the usual anonymous Wikipedia article, this piece is attributable to Eric Miraglia, Dept. of English/Student Advising and Learning Center, Dr. Richard Law, Director, General Education, and Peg Collins, Information Technology, Learning Systems Group, all at Washington State University.

[3] Now that The New York Times has restricted access to its archives, it is difficult to know how best to cite online articles that may not be available to all, nor for a lengthy period. However, I hope that this URL will lead the reader to my "saved" copy. http://select.nytimes.com/2007/04/30/opinion/30krugman.html?pagewanted=all

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7 THOUGHTS ON "DIGITAL PROSPERITY. UNDERSTANDING THE ECONOMIC BENEFITS OF THE INFORMATION TECHNOLOGY REVOLUTION"

naija
on **January 30, 2014 at 11:33 AM** said:

Awesome talk! Thank you so much for hosting Great.

http://www.belrim.info/
on **January 31, 2014 at 12:49 PM** said:

great! i'm so glad that if found your website I will be sharing this for later!
- investing in silver is an interest of mine and and

your "Digital Prosperity. Understanding the Economic Benefits of the Information Technology Revolution | Interface" article is surely good work.

great stuff, I'll check back again very soon!

plotka
on **February 1, 2014 at 1:47 AM** said:

Hurrah, that is certainly what I was looking for, what a information! offer right here at this website, thanks admin of this website.

Accountants
on **February 1, 2014 at 3:43 AM** said:

I was able to find good advice from your articles.

9ja
on **February 3, 2014 at 1:33 AM** said:

Great post! I'm heading to get to check these all out! I have witnessed bits with the 1 Scorcese film on a Stones.

temat
on **February 3, 2014 at 1:57 AM** said:

This is my very first time pay a visit at the following and i am definitely impressed to read everthing at alone place.

Tyisha Curtice
on **February 3, 2014 at 4:02 AM** said:

Most definetely time (if not a little late) to rock and roll this years resolution plans!!